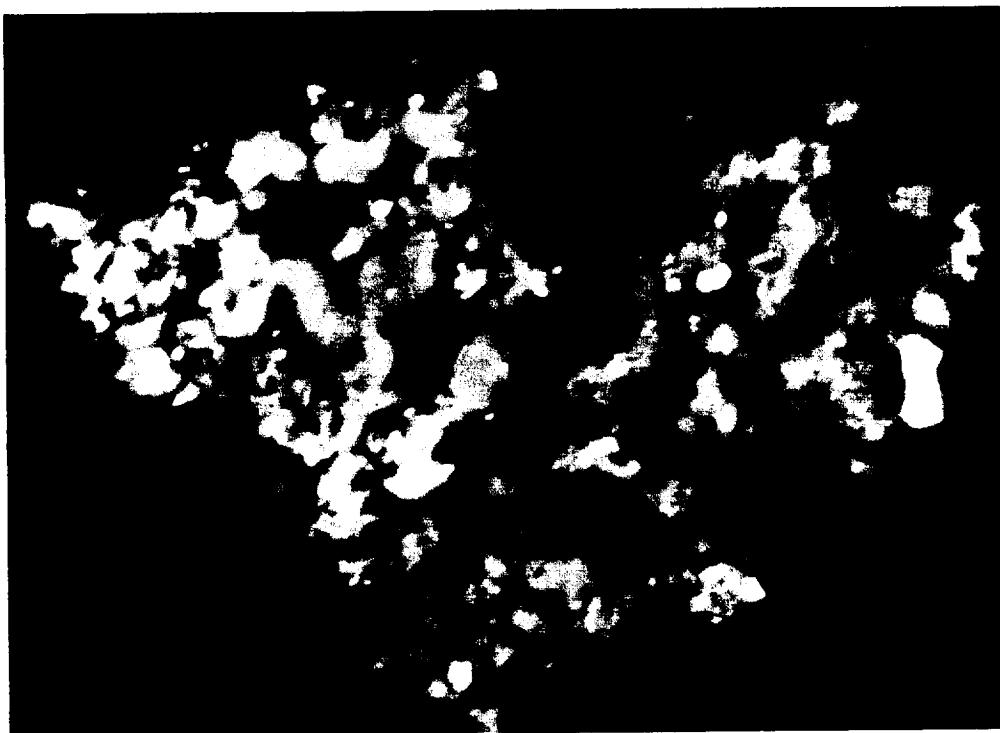


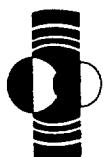
# WORKSHOP ON THE ANALYSIS OF INTERPLANETARY DUST PARTICLES



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ANALYSIS OF INTERPLANETARY DUST  
PARTICLES (Lunar and Planetary  
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**WORKSHOP ON  
THE ANALYSIS OF INTERPLANETARY  
DUST PARTICLES**

Edited by

M. Zolensky

Held at  
Lunar and Planetary Institute

May 15–17, 1993

Sponsored by  
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Lunar and Planetary Institute 3600 Bay Area Boulevard Houston TX 77058-1113

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Cover: Backscattered electron image of a hydrated, chondritic interplanetary dust particle, measuring 17  $\mu\text{m}$  across.

# Program

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*Saturday, May 15, 1993*

**7:30–8:30 a.m.** *Registration and Continental Breakfast*

**8:30 a.m.–5:00 p.m.**

## INVITED PRESENTATIONS AND DISCUSSION TOPICS

*An Overview of the Origin and Role of Dust in the Early Solar System*

D. Brownlee

*Modern Sources of Dust in the Solar System*

S. Dermott

*Remote Sensing of Cometary Dust and Comparisons to IDPs*

M. S. Hanner

*What Does the Fine-Scale Petrography of IDPs Reveal About Grain Formation and Evolution in the Early Solar System?*

J. Bradley

*Solar System Exposure Histories of Interplanetary Dust Particles*

A. O. Nier

*Changes in IDP Mineralogy and Composition by Terrestrial Factors*

G. J. Flynn

**5:00–7:00 p.m.**

## POSTER SESSION AND RECEPTION

*Further Analysis of Remnants Found in LDEF and MIR Impact Craters*

L. Berthoud and J. C. Mandeville

*Solar Energetic Particle Track Densities as an Indicator of the Origin of Interplanetary Dust*

G. E. Blanford

*LDEF Meteoroid and Debris Database*

C. B. Dardano, T. H. See, and M. E. Zolensky

*Cometary Dust: A Thermal Criterion to Identify Cometary Samples Among the Collected Interplanetary Dust*

G. J. Flynn

*An Assessment of the Contamination Acquired by IDPs During Atmospheric Deceleration*

G. J. Flynn

*Carbon in Comet Halley Dust Particles*

M. Fomenkova and S. Chang

*Volatiles in Interplanetary Dust Particles: A Comparison with Volatile-rich Meteorites*

E. K. Gibson Jr. and R. Bustin

*Some Considerations on Velocity Vector Accuracy in Dust Trajectory Analysis*

A. A. Jackson and H. A. Zook

*Antarctic Micrometeorites*

G. Kurat, C. Koeberl, T. Presper, F. Brandstätter, and M. Maurette

*Status Report—Small Particles Intact Capture Experiment (SPICE)*

K. Nishioka, G. C. Carle, T.E. Bunch, D. J. Mendez, and J. T. Ryder

*Quantitative Analyses of Carbon in Anhydrous and Hydrated Interplanetary Dust Particles*

K. L. Thomas, L. P. Keller, G. E. Blanford, and D. S. McKay

*Origin of the Hydrocarbon Component of Interplanetary Dust Particles*

T. J. Wdowiak and W. Lee

*$^6\text{Li}/^7\text{Li}$ ,  $^{10}\text{B}/^{11}\text{B}$ , and  $^{7}\text{Li}/^{11}\text{B}/^{18}\text{Si}$  in Individual IDPs*

Y.-L. Xu, L.-G. Song, Y.-X. Zhang, and C. Y. Fan

*Compositional Variations of Olivines and Pyroxenes in Chondritic Interplanetary Dust Particles*

M. E. Zolensky and R. A. Barrett

*On Dust Emissions from the Jovian System*

H. A. Zook, E. Grün, M. Baguhl, A. Balogh, S. J. Bame, H. Fechtig, R. Forsyth, M. S. Hanner, M. Horanyi, J. Kissel, B.-A. Lindblad, D. Linkert, G. Linkert, I. Mann, J. A. M. McDonnell, G. E. Morfill, J. L. Phillips, C. Polanskey, G. Schwehm, N. Siddique, P. Staubach, J. Svestka, and A. Taylor

**Sunday, May 16, 1993**

**8:30 a.m.–6:00 p.m.**

## **INVITED PRESENTATIONS AND DISCUSSION TOPICS**

*Mineralogical and Chemical Relationships of Interplanetary Dust Particles,  
Micrometeorites, and Meteorites*

W. Klöck and F. J. Stadermann

*Chemical Compositions of Primitive Solar System Particles*

S. R. Sutton and S. Bajt

*Carbon in Primitive Interplanetary Dust Particles*

L. P. Keller, K. L. Thomas, and D. S. McKay

*History of Elements in the Early Solar System, Based on Isotope Studies of Dust*

R. Walker

*A Proposition for the Classification of Carbonaceous Chondritic Micrometeorites*

F. J. M. Rietmeijer

*Data from Collection of IDPs in Low-Earth Orbit*

D. S. McKay and W. Tanner

*Collection and Curation of IDPs in the Stratosphere and Below*

M. Maurette and M. Zolensky

**Monday, May 17, 1993**

**8:30 a.m.–12:00 noon**

*Future Opportunities to Return Primitive Materials Directly from Space*

W. Kinard

**Discussion**

**12:00 noon      Workshop adjourns**



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